G. R. S. [IX-5]

Previous references.

File No. 445-14

Serial Nos. 1—18

1914.

(Gen. Rus.)

Later references.

GENERAL AND REVENUE SECRETARIAT.

Serial Nos.

Part B for April 1916.

SUBJECT.

Invention for "Improvements in the Connections of Electrical condensers".

G.R.S. 11] 1914-15.

GENERAL AND REVENUE SECRETARIAT.

(Gen: Mis)

NOTES.

Gen File No. 245 14/15

FILE HEADING.

Invention for "Improvements in the connections of Electrical condensers" by Marconi's Wireless Telegraph Co Ltd of Marconi House, Strand, London.

From Messrs Remfry & Son, Calcutta.

No. Dated 12. 4. 15 Received 15. 4. 15

Diary No. 9016 | Enclos. 3 & Rs 11-8-0 Spare Copies. | Serial No. 1

BRIEF ABSTRACT OF LETTER.

Forward an application for leave to file a specification of the invention and also a Deed of Assignment and a power-of-attorney and remit Rs 11-8-0 as application and stamp fees.

NOTES AND ORDERS.

As the consideration for the assignment is only 5 Sh, a stamp fee of only as 8 is leviable on the document. The usual drafts are subd.

[illegible] Issue

22/7

NOTES—First Sheet.

122
1220

G. R. S. 12]

General and Revenue Secretariat.

for File No. 445 of 1914.

Serial No.	
2	To D.C., Hy Deptt, Bangalore. No. C/1448 dt 3 8 15
	Forwards Rs 10/- cost of the amount recd with the above & requests ackt
3	To the Supdt of Stamps. No. C/1449. dt 3 - 8 15
	For the Deed of Assignment & the power of attorney for being stamped.
4	To the Dy of Edn. No. C/1450 dt 3. 8 15
	For the applr for obtaining the a report thereon from Mr E.P. Metcalfe.
5	From the D.C. Hy, Bangalore. No. 78 dt 5 - 8 15
	Acknowledges the receipt of the amount fd with dt 2.
6	From the Supdt of Stamps. No. 60 dt 6. 8 15
	Forwards duly stamped the documents fd with dt 3 & requests acknowledgment.
	Draft acknowledging is subd
	14/9/15 JStone. Asst 14/9
7	Supdt of Stamps: No: C/3931 dt 17/9
	Acknowledges the receipt of the documents received with dt 6.
	The Dy. of Education has not yet submitted the report called for in Serial 4 above.
	Draft reminder subd.
	21/9/15 JStone. Asst. Issued 22/9

NOTE—Contn. sheet.

GPB—25,000—30-4-15

1270
7039
8482

(3)

G. R. S. 12]

General and Revenue Secretariat. | G-M. File No. 445 of 1914.

Serial No.	
8	From the I.G. of Education No. 14417/574 dt. 2-2-16 With reference to sl 4 above forwards copy of letter from Mr. Metcalfe stating that the leave applied for may be granted. Drafts Submitted 11/2/16 18/2-16 First Member Drs. agd by Member 9/3 9.3
9	To. Messrs. Marconis Wireless Telegraph Co No. G 12891 dt 15-3-16 Authorizes him to file a Specification of the said invention.
10	To. messrs. Remfry & Son. Calcutta. No. G 12892 dt 15-3-16 Forwards G.O. referred to in sl 9 and requests to communicate the fact to the party Concerned.
11	From Messrs Remfry & Son Calcutta Letter dt 23-3-16 Forwards four Copies of the Specification & Rs. 3/- and regrets that the Specification may be R'd. Drafts Subtd. The G.O. may also be initialled. 29-3-16 31/3-16

NOTE—Contn. sheet.

GPB—70,000—17-12-15

8482
9030
9489
9581

4

G. R. S. 12]

General and Revenue Secretariat. | G.M. File No. 445 of 1914.

Serial No.	
12	To. The Treasury Officer, District Treasury Bangalore ## No. G14074 dt 7-4-16 Forwards Rs 30/- being the fee for filing the specification the invention referred to in sl 1.
13	To. The Compiler No. G14075 dt 7-4-16 Notifies the filing of a specification of an invention referred to in sl 1.
14	To. Messrs. Remfry & Son Calcutta No. G14076 dt 7-4-16 Forwards a copy of the Notification referred to in sl 13 & requests to Communicate ~~contents~~ fact to the party Concerned
15	To. The D. G of Education " Chief Engineer " Supdt Govt Museum. No. G14077-9 dt 7-4-16 Forwards copies of specification of the above invention for record in their offices & requests an acknowledgement.
16	From the Supdt Govt Museum ... No. 194 dt 13-4-16
17	From the D.G. of Education ... No. 21123/898(a) dt 22-4-16
18	From the Chief Engineer of Mysore ... No. 3854 dt 26-4-16 Acknowledge receipt of the Specification forwarded with the above.

The ackt due from the Bangalore Dt Treasury & sl 12 above will be awaited

Read 3/5/16 VS

11/5/16

NOTE—Contn. sheet.

GPB—70.000—17-12-15

95-37

G. R. S. 12]

General and Revenue Secretariat. | fm. File No. 445 of 1914.

Serial No.

No ackt has been received from the Bangalore Dt Treasury.

To the Cash Section for kind. noting whether the sum of Rs 30/- sent with Sl. 12 above has been acknowledged in the Remittance Register of this office.

Kuto 16/8/16

The amount was acknowledged in the Treasy: Remittance Register, Treasy: No: 23. Dt 12-4-16

12/8/16 17/8/16

Subbd

The papers may now be filed

Kuto 24/8/16

Page 4

REGISTERED.

To

THE ~~CONTROLLER OF PATENTS~~, SECY TO THE GOVT OF MYSORE,
~~PATENT OFFICE~~, GENL. & REV. DEPTS.,
~~CALCUTTA~~. BANGALORE,
MYSORE.

FROM

REMFRY & SON,
SOLICITORS AND PATENT AGENTS,
CALCUTTA.

DIARY No. 9016

1914-1915
SIR, Mis
445-14
1

Dated CALCUTTA, the 12th April 1915.

DEPT.	P.	FILE LR.	M.
FILE INDICATION			
Mysore Pats.			

re MARCONI'S WIRELESS TEL: CO. LD. (MYSORE)

(Brit. NO. 21672/13 dated 25/9/13.)

We have the honour to forward herewith an Application of MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED, of Marconi House, Strand, London, England, Electricians, for leave to file a Specification under Part I of the Mysore Inventions & Designs Regulation, 1894, in respect of an Invention for "IMPROVEMENTS IN THE "CONNECTIONS OF ELECTRICAL CONDENSERS", and solicit the favour of your submitting the same to H. H. the Dewan.

A Deed of Assignment from Richard Norman Vyvyan in favour of the Applicant Co. (consideration Rs. 5/-) and a Power of Attorney under which we are acting are also enclosed and we solicit the favour of your having such documents stamped -/8/- and Re.1/- respectively.

The corresponding British Patent is No. 21672 dated 25th September 1913 (R. N. (2) Vyvyan & Marconi's Wireless (1) Tel.Co.Ld.) and a Certified Copy of the printed Specification of such British Patent is enclosed.

A Post Office Order for Rs. 11/8/- is sent today.

We have the honour to be,
Sir,
Your very obedient servants,

Remfry & Co

MYSORE APPLICATION.

I.M.B.

P/O (Genl.) 1,000—4·2·14. [1,000—17·3·11]

I Certify this, including the Drawing forming part thereof, to be a true Copy.
9 MAR 1915
Acting for Comptroller.

N° 21,672 A.D. 1913

Date of Application, 25th Sept., 1913
Complete Specification Left, 21st Mar., 1914—Accepted, 25th Sept., 1914

PROVISIONAL SPECIFICATION.

Improvements in the Connections of Electrical Condensers.

We, MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, and RICHARD NORMAN VYVYAN, Electrical Engineers, both of Marconi House, Strand, London, W.C., do hereby declare the nature of this invention to be as follows:—

The object of this invention is to provide improved connections for electrical condensers especially such as are used in wireless telegraph transmitting apparatus.

In large condensers, especially those employed in wireless telegraphy it is of great importance that the oscillation constants of all the individual portions of the condenser bank shall be as nearly as possible the same in order that surging currents may not be set up between different rows of condenser jars. It is also important that the inductance of the primary circuit outside the jigger should be reduced to a minimum, in order that as large a proportion of the total inductance in the circuit as possible may be in the jigger.

With these objects we connect the units of which the whole condenser is composed and which consist of a few, say three, condenser jars in series to the main busbars by connections which are identical in every respect. The busbars are made of thin copper strip, affording a large surface area for the passage of the oscillatory currents, and the main and return connections to any one point in the condenser circuit are kept strictly parallel to one another and as close together as possible taking into consideration the voltage and the nature of the insulation utilised.

The adjacent terminals of the jars in a unit are connected together by means of a straight piece of copper strip, the inner terminal being connected to the busbar. This copper strip is covered by a porcelain insulator of H section, the ends of which are recessed back to prevent leakage. The long copper strip from the outer terminal to the busbar lies in this insulator, and is thus brought as close as possible to the connecting pieces between the condensers without any danger of flashing over. The distance between the long copper strip and the interconnecting pieces is also kept constant in all the condensers, thus preventing the surging spoken of above.

The whole condenser is usually made up of eight nests each consisting of a number of units of three condenser jars in series. It is of the utmost importance that the circuits from the points where all the main busbars from the nests unite to the nests themselves shall be exactly identical in order that the surging currents above mentioned may not be set up between the nests, where of course they would be of much greater magnitude than between separate units.

The main busbars are rigidly held at a fixed distance apart by means of porcelain insulators suitably supported so that the inductance in the main busbars may be constant.

Since the rotating disk is that part of a wireless telegraph transmitter which is most likely to break down we usually connect a condenser bank to two disks either of which may be used. The connections to the disks are identical, and

[Price 8d.]

PRICE 6d.

the disk connections are joined to exactly similar points on the main busbars in order that there may be no change of wave length when one disk is changed for the other. A slightly inductive link may be used in conjunction with one or the other of the disks in order to correct any slight differences in wave length.

The invention is illustrated in the accompanying drawings in which Figure 1 is a side elevation and Figure 2 a plan of a unit of three jars.

a are the jars, *b* b^1 the busbars, *c* the insulators shown in cross section in Figure 3.

Figures 4 and 5 are respectively a plan and side elevation of a condenser composed of eight nests of jars connected to a jigger *d* which can be connected at *e* or e^1 to one of two disk transmitters.

Figure 6 is a plan of an arrangement in which two condensers of four nests each are connected to two independent jiggers so connected to three disks at e e^1 e^2 that each jigger is served by two disks.

Each jigger is fixed with its axis in such a line that the mutual inductance between it and the condenser busbars may be a minimum; at the same time it is so arranged in a position as nearly as possible symmetrical to all the nests of condensers that the mutual inductance between it and the busbars of any one nest is the same as that between the jigger and the busbars of any other nest.

Dated this 24th day of September, 1913.

MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED.

The common seal of Marconi's Wireless Telegraph Company, Limited, was hereto affixed in the presence of

ALFONSO MARCONI,
H. RIALL SANKEY,
Directors.
HENRY W. ALLEN,
Secretary.

R. N. VYVYAN.

COMPLETE SPECIFICATION.

Improvements in the Connections of Electrical Condensers.

We, MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, and RICHARD NORMAN VYVYAN, Electrical Engineers, both of Marconi House, Strand, London, W.C., do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The object of this invention is to provide improved connections for electrical condensers especially such as are used in wireless telegraph transmitting apparatus.

In large condensers, especially those employed in wireless telegraphy it is of great importance that the oscillation constants of all the individual portions of the condenser bank shall be as nearly as possible the same in order that surging currents may not be set up between different rows of condenser jars. It is also important that the inductance of the primary circuit outside the jigger should be reduced to a minimum, in order that as large a proportion of the total inductance in the circuit as possible may be in the jigger.

Our invention is illustrated in the drawings accompanying our Provisional Specification Figure 1 being a side elevation and Figure 2 a plan of a unit of three jars.

With the objects set out above we connect the units of which the whole condenser is composed and which consist of a few, say three, condenser jars *a* in series to the main busbars *b* b^1 by connections which are identical in every respect. The busbars are made of thin copper strip, affording a large surface area for the passage of the oscillatory currents, and the main and return connections to any one point in the condenser circuit are kept strictly parallel to one another and as close together as possible taking into consideration the voltage and the nature of the insulation utilised.

The adjacent terminals of the jars in a unit are connected together by means of straight pieces of copper strip *f* the inner terminal being connected to the busbar b^1. This copper strip is covered by a porcelain insulator *c* of H section (see Figure 3), the ends of which are recessed back as at *g* to prevent leakage. The long copper strip f^1 from the outer terminal to the busbar *b* lies in this insulator, and is thus brought as close as possible to the connecting pieces between the condensers without any danger of flashing over. The distance between the long copper strip f^1 and the interconnecting pieces *f* is also kept constant in all the condensers, thus preventing the surging spoken of above.

The whole condenser is usually made up of eight nests each consisting of a number of units of three condenser jars in series.

Figures 4 and 5 are respectively a plan and side elevation of a condenser composed of eight nests of jars connected to a jigger *d*, each nest comprising 16 units like Figure 1.

It is of the utmost importance that the circuits from the points *h* where all the main busbars *b* b^1 unite to the nests themselves shall be exactly identical in order that the surging currents above mentioned may not be set up between the nests, where of course they would be of much greater magnitude than between separate units.

The main busbars are rigidly held at a fixed distance apart by means of porcelain insulators *i* suitably supported so that the inductance in the main busbars may be constant.

Since the rotating disk is that part of a wireless telegraph transmitter which is most likely to break down we usually connect a condenser bank to two disks either of which may be used. The connections to the disks are identical, and the disk connections are joined to exactly similar points on the main busbars in order that there may be no change of wave length when one disk is changed for the other. A slightly inductive link may be used in conjunction with one or the other of the disks in order to correct any slight differences in wave length.

In Figures 4 and 5 the jigger *d* may thus be connected to either one or other of two disks at *e* e^1.

Figure 6 is a plan of an arrangement in which two condensers of four nests (each comprising 26 units) each are connected to two independent jiggers so connected to three disks at *e* e^1 e^2 that each jigger is served by two disks.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A bank of condensers comprising a number of units connected together so that the oscillation constants of all the units is practically the same substantially as described.

2. A bank of condensers comprising a number of units connected together so that the inductance of the connections is as small as possible substantially as described.

3. A bank of condensers comprising a number of nests each composed of a number of condenser jars, the nests being connected together by identical connections substantially as described.

Improvements in the Connections of Electrical Condensers.

4. Means for connecting condenser jars substantially as described with reference to Figures 1, 2 and 3.

5. A condenser substantially as described with reference to Figures 4 and 5.

6. A condenser substantially as described with reference to Figure 6.

Dated this 17th day of March, 1914.

MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED.

The common seal of Marconi's Wireless Telegraph Company, Limited, was hereto affixed in the presence of

ALFONSO MARCONI,
H. RIALL SANKEY,
Directors.
HENRY W. ALLEN,
Secretary.

R. N. VYVYAN.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1914.

Fig. 3.

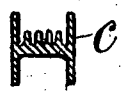


Fig. 1.

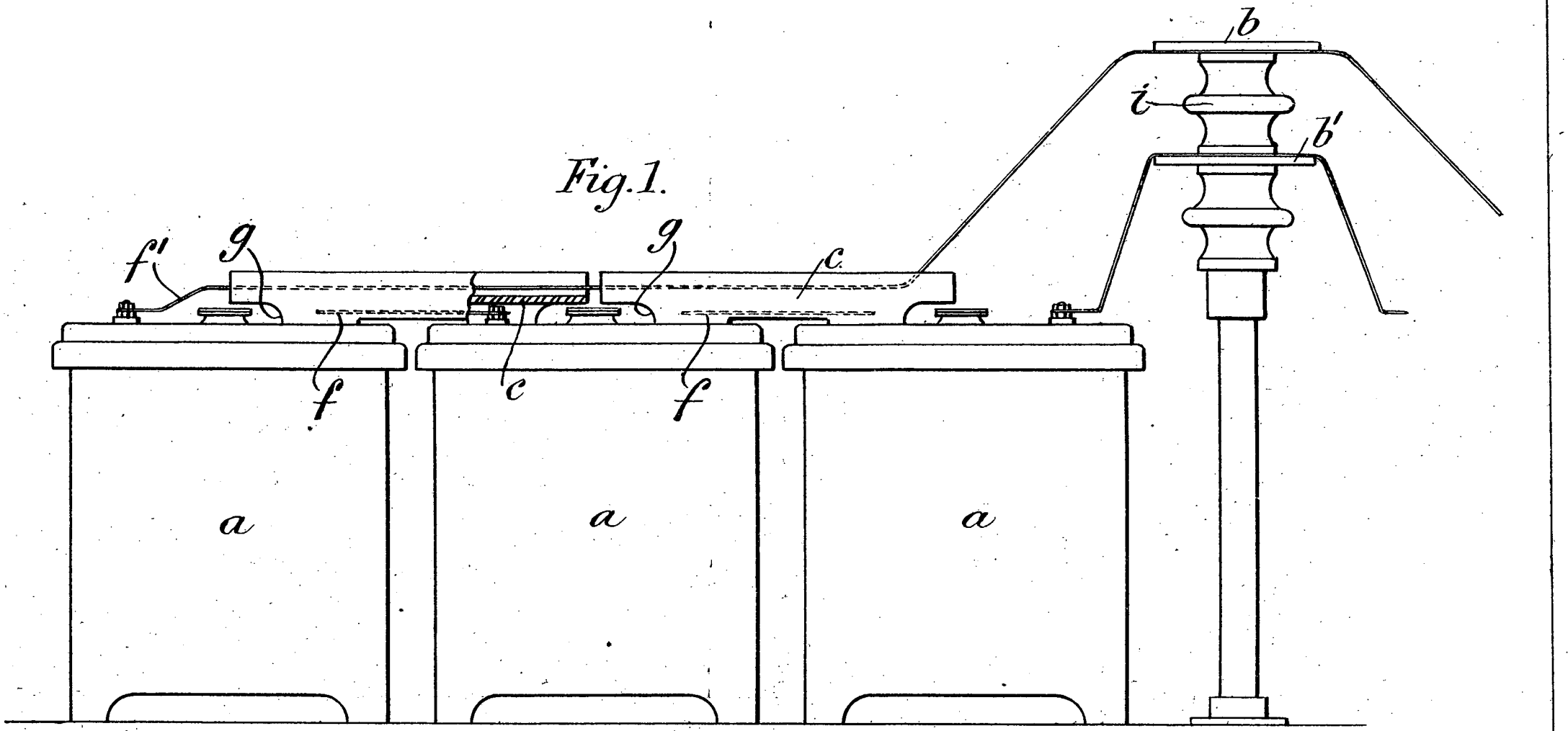
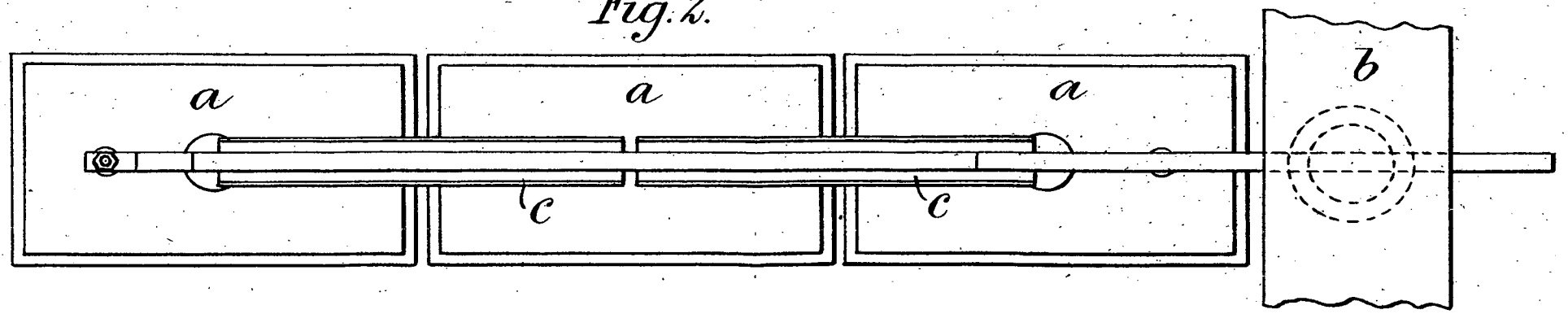


Fig. 2.



This Drawing is a reproduction of the Original on reduced scale.

Fig. 5.

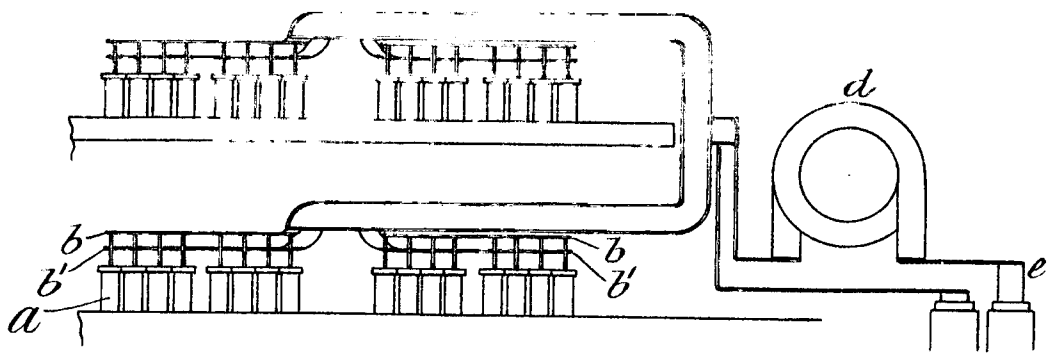


Fig. 4.

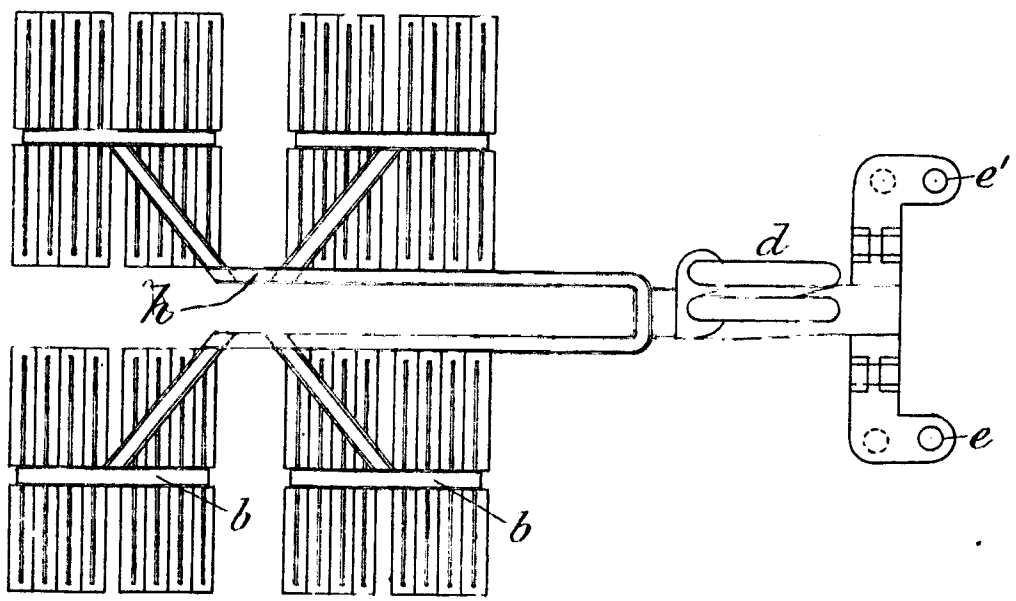
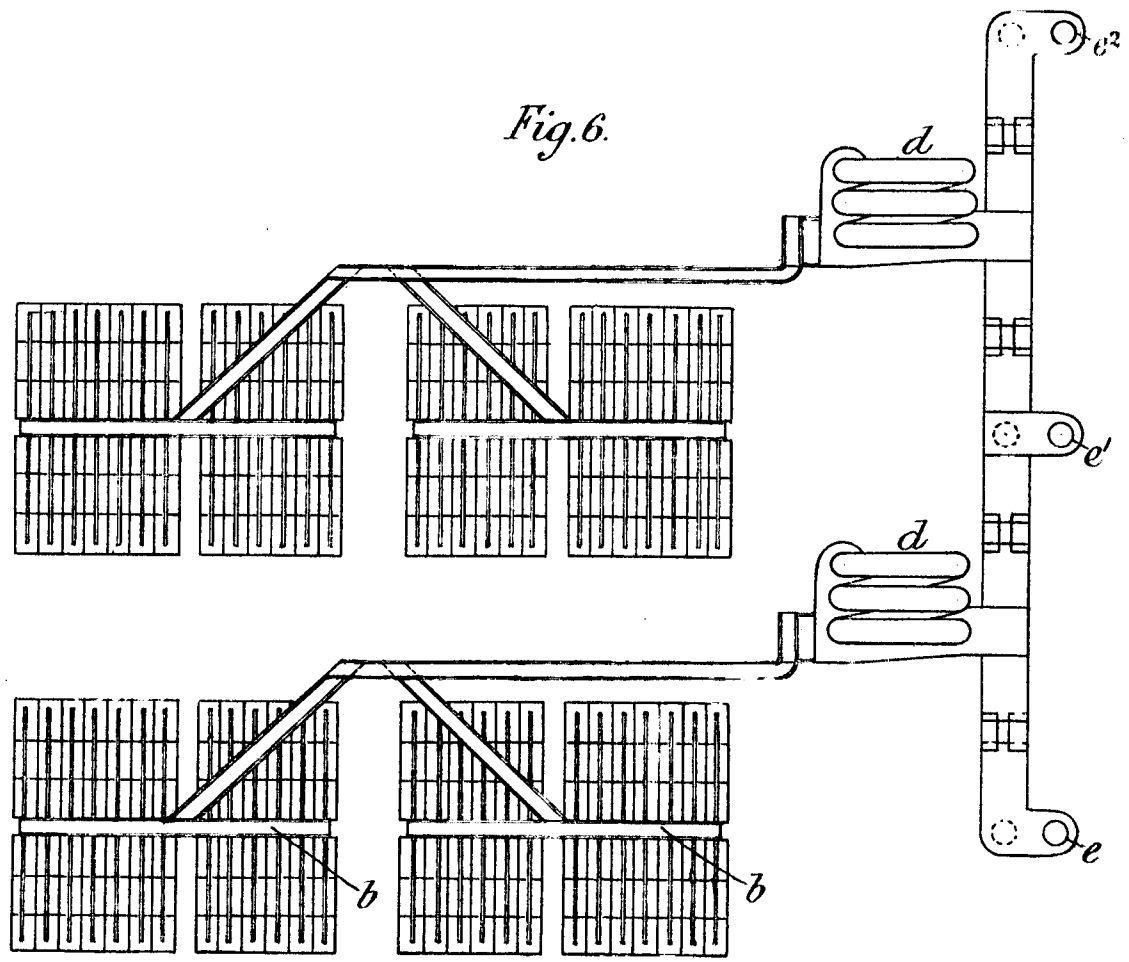


Fig. 6.



Malby & Sons, Photo-Litho

G. R. S. 26]

SUBJECT 15/9/15 WM

Diary No. of letter replied to 9016

Section for : Mis

File No. 445-14

Serial No. 2

General and Revenue Secretariat

( )

, the 191 .

No. C. 1648/Rs 10/-

Date of issue 3. 8. 15

To

The Deputy Commr, Ry Deptt,

Bangalore.

Signed by for Secl R. Ray

Sir,

I am directed to forward herewith a sum of Rs 10/- received from Messrs Rentzy & Son, Calcutta, being the application fee payable under cl 1 schedule IV of the Mysore Inventions and Designs Regn XI of 1894, for leave to file a specification of an invention for "Improvements in the connections of Electrical

over.

Condensers" by Marconi's Wireless Telegraph Co Ltd of Marconi House, Strand, London, and to request the favour of an acknowledgment.

I have &c,

M Sa

27/7

for the Secretary

Genl Dept

List of enclosures

Copied by

Examined by

Money order in
W/S 578

16
3 2½

G. R. S. 26]

15/4/15

SUBJECT.....

.....

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Diary No. of letter replied to 9016

Section Genl: Mis
File No. 445-14
Serial No. 3

General and Revenue Secretariat

( )

, the 191

No. G. 1649 / on and ab
assignment &
power of attorney
Rel- to

Date of issue 3. 8. 15

Signed by for Chief N. Ray

To The Superintendent of Stamps.

Sir,

I am directed to forward herewith a deed of assignment executed by Mr. R. N. Vyvyan, in favor of Marconi's Wireless Telegraph Co. Ltd and a power-of-attorney by the latter constituting Messrs Remfry & Son, Calcutta, as their agents in respect of the invention for "Improvements in the Connections of Electrical Condensers" and to request that

over.

the documents may be impressed with
the Mysore General stamp of the values
Annas eight and Rs one respectively,
(also herewith sent) and the returned
to this Office.

I have &c,

MGR

27/7

for Secretary,

Govt Deptt

List of encls

Copied by

Examined by

(P.T.O.—20,000—14-2-)

3 8112

G. R. S. 26]

SUBJECT.....

.....

.....

Diary No. of letter replied to 9016

General and Revenue Secretariat

( )

, *the* 191 .

Date of issue 3. 8. 15

Signed by Ker Fred R. Ray

Section Genl: Mis

File No. 445-14

Serial No. 4

No. G. 1450/one

To The Dy. of Education.

Sir,

I am directed to forward herewith an application for leave to file a specification of an invention for "Improvements in the connection of Electrical Condensers" by Marconi's Wireless Telegraph Co Ltd, and to request that the opinion of Mr. E. Metcalfe, B.Sc., Professor of Physics, Central College, may be obtained thereon and forwarded

over.

White House.

Thank you,
Ben
2-7-17
Ex. Office Secretary,
Ci Digital Ben

List of ... Letters

Copied by

Examined by

GPO 20.000 1-24-17

DIARY No. 1222

1915-16

Fee. Mis

445-14

Book No. 1059 5 As. 75

Rs. 10-0-0

Treasury dated 5th August 1915

Received from the Secretary to Govt of Mysore Land Revenue Department Bangalore

Rupees Ten only

Annas _____ and Pies _____ being on account of

the amount of application fees received from persons

desirous of Lease Calcutta Forward Mysore Government

Decision of 8th received with docket no: G. 1448

D/3-8-15.

Cum 445-14-2

In charge of Treasury

Treasurer

Bangalore

DIARY No. 1270

Stamp 19]

No. 60
Enc. 4

OFFICE OF THE SUPERINTENDENT OF STAMPS IN MYSORE,
Bangalore, Dated 6th *August* 191 6.

FROM
A. Krishnaswami Rao, ESQ., B.A.B.L
Superintendent of Stamps in Mysore

To
D. M. Narasinga Rao, ESQ., B.A, B.L
Offg Secretary to the Government
of Mysore General Department
Bangalore.

SIR,

I have the honor to return herewith one Agreement and 3 Powers of Attorney received with your Noo G 1449/F.m 445-14-3, G 1453/F.m 316-14-5 and G 1457/F.m 446-14-3 & 3d Notarial, duly stamped as desired and to request an acknowledgment.

I have the honor to be,
Sir
Your most obedient Servant

GBPM—200—26-1-1915

Superintendent of Stamps
in Mysore.

16

POWER OF ATTORNEY.

12

In the matter of the Inventions and Designs Regulation, 1894, of the Government of Mysore, and in the matter of Marconi's Wireless Telegrapl Company, Limited, of Marconi House, Strand, London, England, Electricians Assignees of Inventor.

We, the above named Marconi's Wireless Telegraph Company, Limited, do hereby retain, constitute and appoint RUPERT REMFRY, Solicitor and Patent Agent of 8/2 Hastings Street, Calcutta, British India, -- -- as our agent and attorney, to apply for and obtain from the Government of Mysore, and keep in force, an Exclusive Privilege or Letters Patent for "Improvements "in the connections of electrical condensers", and we authorize him to sign our name to such papers and writings and do such acts regarding the same, including the appointment of a substitute or substitutes, as may be necessary or expedient.

Dated this 1st day of March 1915

The Common Seal of Marconi's Wireless Telegraph Company, Limited, was hereto affixed at London, England, in the presence of:-

Seal

Directors

Secretary

Invs c
2/10-2/12

ASSIGNMENT.

WHEREAS I, RICHARD NORMAN VYVYAN, of Marconi House, Strand, London, England, Electrical Engineer, jointly with Marconi's Wireless Telegraph Company, Limited, of Marconi House, Strand, London, England, Electricians, have obtained a grant of Letters Patent in the United Kingdom, No.21672, dated the 25th day of September 1913, for "Improvements in the connections "of electrical condensers", AND WHEREAS the said Marconi's Wireless Telegraph Company,Limited, are desirous of obtaining a patent in Mysore for the said invention in their own name: N O W THEREFORE know ye that for and in consideration of the sum of Five shillings to me in hand paid, the receipt of which is hereby acknowledged, I, the said Richard Norman Vyvyan have assigned and transferred, and by these presents do sell, assign and transfer, unto the said Marconi's Wireless Telegraph Company, Limited, their successors and assigns, all my right, title and interest in and to an Exclusive Privilege or Letters Patent to be obtained for the said invention from the Government of Mysore, and all and singular the liberties, powers, privileges and advantages whatsoever appertaining or belonging thereunto, the same to be held and enjoyed by the said Marconi's Wireless Telegraph Company, Limited, their successors or assigns, for the full term for which such Exclusive Privilege or Letters Patent may be granted, or any prolongation or extension thereof, as fully and entirely as the same could have been held and enjoyed

G.R.S. 26]

SUBJECT.....

.....

.....

Diary No. of letter replied to 1270

General and Revenue Secretariat

( )

, the *191* .

Date of issue 17.9.15

Signed by Mr. Rus R. Row

Section Gen: Mis

File No. 445/14

Serial No. 7

No. 9391

To

The Supdt of Stamps,

Bangalore.

Sir,

I am directed to acknowledge the receipt of the duly stamped documents forwarded with your letter no. 60.8 6th August 1915, in regard to the inventors for "Improvements in the connections of Electric Condensers" by the Marconi's wireless Telegraph Co.

I have &c

over.

M80
14/9
To Secretary
for draft

Letter No.14417/374 dated 31st January/2nd February 1916, from the Inspector-General of Education, to the Secretary to Government, General Department, Bangalore.

7039

14-15
G.M.
445-14

With reference to your letters noted in the margin forwarding for favour of Mr. E. P. Metcalfe's opinion, certain applications for leave to file specifications of certain inventions, I have the honour to forward herewith copy of - letter dated the 28t instant from Mr. - Metcalfe furnishing his opinion in the matter.

X	X	X	:
No.1450/G.M.445-14-4	dated 3rd Aug.,	1915.	:
X	X	X	:
X	X	X	:

The applications received with the letters referred to above are returned herewith.

"C O P Y"

Secretary to Government,
General Department.

GKV.4

Letter dated 28th January 1916 from E.P. Metcalfe, Esq., Niton, Palace Road, Bangalore, to the Inspector-General of - Education in Mysore, Bangalore.

- - - - -

I have the honour to state that in my opinion leave may properly be given to file the specifications of the following inventions:--

X X X

Improvements in the connections of electrical condensers

(Marconi's Wireless Telegraph Co., Ltd.,)

X X X

X X X

- - - - - - - -

" C O P Y "

Secretary to Government,
General Department.

GKV.4

Mysore
21672/19

Pages 31 & 36 removed and pasted in the Register B 22.7.19 21

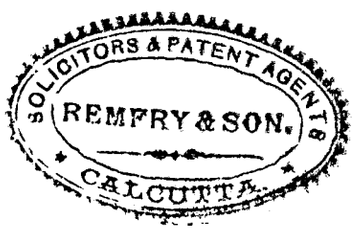
TO THE DEWAN OF MYSORE.

The Application of MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, Electricians, of Marconi House, Strand, London, England, for leave to file a specification under Part I of the Mysore Inventions and Designs Regulation, 1894.

(1) The applicants, jointly with Richard Norman Vyvyan, of Marconi House, Strand, London, England, Electrical Engineer, and of whom the applicants are the assignees, have obtained a patent in the United Kingdom, No.21672, dated and sealed as of the 25th day of September 1913, and actually sealed on the 24th day of December 1914, for "Improvements "in the connections of electrical condensers".

(2) To the best of the information and belief of the applicants, the invention is new within the meaning of Part I of the Mysore Inventions and Designs Regulation, 1894, and no circumstance exists which, if the applicants are authorized to file a specification and file it in accordance with that Part, will disentitle them to an Exclusive Privilege thereunder in respect of the invention.

(3) The following is a description of the invention:-



Ref n° 18
of 19th 15 12.

The object of this invention is to provide improved connections for electrical condensers especially such as are used in wireless telegraph transmitting apparatus.

In large condensers, especially those employed in wireless telegraphy it is of great importance that the

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the condenser bank shall be as nearly as possible the same in order that surging currents may not be set up between different rows of condenser jars. It is also important that the inductance of the primary circuit outside the jigger should be reduced to a minimum, in order that as large a proportion of the total inductance in the circuit as possible may be in the jigger.

Our invention is illustrated in the accompanying drawings figure 1 being a side elevation and figure 2 a plan of a unit of three jars.

With the objects set out above we connect the units of which the whole condenser is composed and which consist of a few, say three, condenser jars a in series to the main busbars b b^1 by connections which are identical in every respect. The busbars are made of thin copper strip, affording a large surface area for the passage of the oscillatory currents, and the main and return connections to any one point in the condenser circuit are kept strictly parallel to one another and as close together as possible taking into consideration the voltage and the nature of the insulation utilised.

The adjacent terminals of the jars in a unit are connected together by means of straight pieces of copper strip f the inner terminal being connected to the busbar b^1. This copper strip is covered by a porcelain insulator c of H section (see figure 3), the ends of which are recessed back as at g to prevent leakage. The

The long copper strip f^1 from the outer terminal to the busbar b lies in this insulator, and is thus brought as close as possible to the connecting pieces between the condensers without any danger of flashing over. The distance between the long copper strip f^1 and the interconnecting pieces f is also kept constant in all the condensers, thus preventing the surging spoken of above.

The whole condenser is usually made up of eight nests each consisting of a number of units of three condenser jars in series.

Figures 4 and 5 are respectively a plan and side elevation of a condenser composed of eight nests of jars connected to a jigger d, each nest comprising 16 units like figure 1.

It is of the utmost importance that the circuits from the points h where all the main busbars b b^1 unite to the nests themselves shall be exactly identical in order that the surging currents above mentioned may not be set up between the nests, where of course they would be of much greater magnitude than between separate units.

The main busbars are rigidly held at a fixed distance apart by means of porcelain insulators i suitably supported so that the inductance in the main busbars may be constant.

Since the rotating disk is that part of a wireless telegraph transmitter which is most likely to break down we usually connect a condenser bank to two disks either of which may be used. The connections to the disks are identical, and the disk connections are joined to exactly similar points on the main busbars in order that there may be no change of wave length when one disk is changed for the other. A slightly inductive link may be used in conjunction with one or the other of the disks in order

to correct any slight differences in wave length.

In figures 4 and 5 the jigger d may thus be connected to either one or other of two disks at e e^1.

Figure 6 is a plan of an arrangement in which two condensers of four nests (each comprising 26 units) each are connected to two independent jiggers so connected to three disks at e e^1 e^2 that each jigger is served by two disks.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:-

1. A bank of condensers comprising a number of units connected together so that the oscillation constants of all the units is practically the same substantially as described.

2. A bank of condensers comprising a number of units connected together so that the inductance of the connections is as small as possible substantially as described.

3. A bank of condensers comprising a number of nests each composed of a number of condenser jars, the nests being connected together by identical connections substantially as described.

4. Means for connecting condenser jars substantially as described with reference to figures 1, 2 and 3.

5. A condenser substantially as described with reference to figures 4 and 5.

6. A condenser substantially as described with reference to figure 6.

(4) The applicants therefore apply for leave to file a specification of the invention pursuant to Part I of

the Mysore Inventions and Designs Regulation, 1894.

The Common Seal of Marconi's Wireless Telegraph Company, Limited, was hereto affixed in the presence of:-

Seal

Directors

Secretary

I, HENRY WILLIAM ALLEN, Secretary of Marconi's Wireless Telegraph Company, Limited, the applicants above named, do declare that the facts stated in this application are true to my knowledge, except as to matters stated on information and belief, and as to those matters I believe them to be true.

Dated this 1st day of March 1915

2 of 5

GM. 445-14-9

No. G 12891

GOVERNMENT OF MYSORE

General Department.

Register No. 18 **of 1904-15**

Bangalore, the 15/3/ 1916.

WHEREAS an application, dated the 1st March 1915 and received on the 15th April 1915, has been submitted under Section 5 of the Mysore Inventions and Designs Regulation, 1894, by Marconi's Wireless Telegraph Company, Limited, Electricians, of Marconi House, Strand, London, England

(hereinafter referred to as "the applicant") for leave to file a specification of an invention for 'Improvements in the connections of Electrical Condensers'

And whereas the applicant has duly complied with all the requirements of Section 5 of the said Regulation;

The Government of Mysore are pleased, under Section 6 of the said Regulation, to authorize the applicant to file a specification of the said invention in accordance with the provisions of the said Regulation.

ORDERED, that the applicant be, and he is hereby, informed accordingly.

By Order of the Government of Mysore,

2ft.)
K.S.G.

7/3/16

~~For~~ *Secretary to the Govt. of Mysore,*
Gen. ~~and Rev.~~ Dept.

Certified that the fees prescribed in the fourth schedule to the Mysore Inventions and Designs Regulation, 1894, in respect of the application for leave to file the said specification and of the filing thereof have been paid by the applicant, and that the specification hereinbefore described has been duly filed in accordance with the provisions of Section 8 of the said Regulation on this the Twenty-seventh day of March 1916.

2ft.)
K.S.G.

~~For~~ *Secretary to the Govt. of Mysore,*
Gen. and Rev. Dept.

(Section 8 of the Inventions and Designs Regulation, 1894.)

8. (1) If within six months from the date of an order under Section 6, Sub-Section (1), or within such further time, not exceeding three months, as the Government of Mysore, in its discretion, may, on cause shown to its satisfaction and on payment of the fee prescribed in that behalf in the fourth schedule, see fit to allow, the applicant causes a specification of his invention to be filed in manner by this Part required, and the fee prescribed in the fourth schedule in respect of the filing of the specification to be paid, the applicant shall, subject to the other provisions of this Part, be entitled to the exclusive privilege of making, selling and using the invention in the Territories of Mysore, and of authorizing others so to do, for a term of fourteen years from the date of the filing of the specification.

(2) But an exclusive privilege in respect of an invention of a new manufacture shall, notwithstanding anything in Sub-Section (1), cease, if the inventor fails to pay, within the time limited in that behalf by the fourth schedule, any fee prescribed in that schedule in respect of the continuance of the privilege.

(3) If, nevertheless, in any case, by accident, mistake or inadvertence, an inventor fails to pay any such fee within the time so limited, he may apply to the Government of Mysore for an enlargement of the time for making the payment.

(4) Thereupon the Government of Mysore may enlarge the time accordingly, on payment of the fee prescribed in that behalf in the fourth schedule, and subject to the following conditions, namely :—

(*a*) the time for making a payment shall not in any case be enlarged for more than three months ; and

(*b*) if any suit is instituted in respect of an infringement of the exclusive privilege committed after a failure to make a payment within the time limited for the making thereof and before the enlargement of that time, the Court disposing of the suit may, if it thinks fit, refuse to award or give any damages in respect of the infringement.

GPB—500—7-4-09.

6/3

2 of 5

G. R. S. 26]

28 4L4-14

1 M. File No. ~~1446~~

Serial No. 10

Diary No. of letter replied to .....

No. G 12892/and

General and Revenue Secretariat

( )

, *the* 191 .

To

Messrs Remfry and Son,

Solicitors and Patent Agents,

Calcutta

Date of issue 15/3/16.

Signed by Mr. B. L. Ras

Gentlemen,

With reference to your letter G 12th April 1915, I am directed to forward herewith Govt. Order No. G/12891 G 15th March 1916. authorizing the Marconi's Wireless Telegraph Co., Ltd., of London to file a specification of their invention for 'Improvements in the Connections of Electrical Condensers' and to request

O.T over.

SUBJECT.

7/4/16

...RY NO. 8482/21

REGISTERED.

2/2/13

To

THE ~~CONTROLLER OF PATENTS~~, SECY TO THE GOVT OF MYSORE,
~~PATENT OFFICE~~, GENL & REV. DEPTS,
~~CALCUTTA~~ BANGALORE, 11
445 MYSORE.

2014-1615
GH.

FROM

REMFRY & SON,

SOLICITORS AND PATENT AGENTS,

CALCUTTA.

Dated CALCUTTA, the 23rd March 1916.

DEPT.	P.	FILE LR.	M.
FILE INDICATION			
Mysore Pats (Genl)			

SIR,

re MARCONI'S WIRELESS TEL. CO.LD. (MYSORE)

*No.*18/14-15 *dated*

(Brit. No. 21672/13 dated 25/9/13)

Pursuant to the Order granting leave in this matter dated 15th March 1916, Register No. 18 of 1914-15, we have the honour to forward herewith 4 copies of the Specification of MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED, of Marconi House, Strand, London, England, Electricians, in respect of their Invention for "IMPROVEMENTS IN THE CONNECTIONS OF ELECTRICAL CONDENSERS".

The abovementioned Order is enclosed and we solicit the favour of your filling in the Certificate at foot thereof and having same signed.

A Post Office Order for Rs. 30/- is sent today.

We have the honour to name our Office in Calcutta to the Address for Service under the Act.

We have the honour to be,
Sir,
Your very obedient servants,

Remfry & Co

Enclos :-
4 Specns.
Order.

A.M.

) (Genl.) 1,000—4-2-14. [1,000—17-3-11]

G. R. S. 26]

Money sent JB 12-4-16

Diary No. of letter replied to .....

General and Revenue Secretariat

( )

, *the* 191 .

Date of issue 7/4/16

Signed by M. B. Rao

4015

37

Money receipt sent MM 12-4-16

GM. File No. 445-14

Serial No. 12

No. G 14074/Rs 30.

To

The Treasury officer,

District Treasury, Bangalore

Has the honor to forward herewith a sum of Rs. 30/- (Thirty) received from Messrs Remfry & Son, Calcutta, being the fee payable under clause 2 of schedule IV of the Inventions & Designs Regulation XI of 1894 for filing a specification of an invention for 'Improvements in the Connections of Electrical Condensers' by Marconi's Wireless Telegraph Co. Ltd., Electricians

P.T.O.

SUBJECT.

7/4/16

7/4/16

MYSORE GOVT, GEN. & REV. SECRETARIAT,

No. G 14075 /GM. 445-15-71 Dated, Bangalore, 190

NOTIFICATION.

(PATENT.)

The following specification of an invention has been filed in accordance with Sections 8, 9, 10 and 11 of Regulation XI of 1894 (The Inventions and Designs Regulations) and is open to inspection at the Mysore Government Secretariat on application to the Secretary to the Government of His Highness the Maharaja of Mysore, General ~~and Revenue~~ Departments, and on payment of a fee of one Rupee.

By Marconi's Wireless Telegraph Company, Limited, Electricians, of Marconi House, Strand, London, England.

"Improvements in the Connections of Electrical Condensers."

By Order,

For Secretary to G. N. [illegible] Dept.

To

The Compiler, *Mysore Gazette*, for publication.

MYSORE GOVT. GEN. & REV. SECRETARIAT,

No. G 14076 / GA 445-16-17 Dated Bangalore, 7/4/ 1916.
2

From

The Secretary to the Government of H. H. the Maharaja of Mysore,
General ~~and Revenue~~ Department.

To

Messrs Remfry & Son,
Solicitors & Patent Agents, Calcutta.

Gentlemen,
~~Sir,~~

With reference to your letter dated 23rd March 1916, I am directed to forward copy of a Notification No. G 14075 dated 7/4/16. issued by this Government in regard to the invention filed by you under Regulation XI of 1894 (The Inventions and Designs Regulations.) and to request that the fact may be communicated to the parties concerned.

The order granting permission to file specification is herewith returned, with the certificate at foot, duly filled in and signed.

I have the honor to be,
Gentlemen,
~~Sir,~~
Your most obedient servant,

~~For~~ Secretary to Govt
Genl. Dept.

4015

41

G. R. S. 26] 3/0

GM File No. 445-14

Serial No. 15

Diary No. of letter replied to .....

No. G/4077-79/0.

General and Revenue Secretariat

( )

, *the* 191 .

To

The Dy. of Education

" Chief Engineer

" Supdt. Govt Museum

Date of issue 7/4/16

Signed by M. B. T. R. Co.

Has the honor to forward herewith for record in his Office a copy of the Specification of an invention for 'Improvements in the Connections of Electrical Condensers' by Marconi's Wireless Telegraph Co. Ltd, of London & to request the favour of an acknowledgment.

B. O.

Ack.

For Secy to Govt, Genl Depts.

SUBJECT.

42

DIARY NO. 9030

No. 194

Mysore Government Museum.
Bangalore. Dated 10 April 1916.

FROM

The Superintendent,
Government Museum.
Bangalore.

To

The Secretary to the Government of
His Highness the Maharaja of Mysore.
General Department.
Bangalore.

Sir,

I have the honor to acknowledge the receipt of a copy of the specification of an invention for "Improvements in the connection of Electrical condensers" by Marconi's Wireless Telegraph Co., London, forwarded with your No. G14077-79/ G.M.445-14-15, dated 7th April 1916.

I have the honor to be,
Sir,
Your most obedient servant,

Offg. Superintendent.

GPB—100.000—7-8-15

1916.

From The Superintendent,
Govt. Indenn
Bangalore

To The Secretary to the Govt.
of H.H. the Maharaja
of Mysore
General Dept.
Bangalore

Dated 10/10/16

Despatched 13/10/16

Received

General No. 194
No.

Enclosure No. —

Acknowledging the receipt of copy of a specification of an invention for "Improvement in the Connections of Electrical Condensers" by Marconi Wireless Telegraph Co. of London. —

DIARY NO. 9489

43

GPB—3,210—1-6-16

Edn. 15]

OFFICE OF INSPECTOR-GENERAL OF EDUCATION IN MYSORE.

No. 21125 / 898(a)

Bangalore, 22nd April 1916

From

Rao Bahadur
M. SHAMA RAO, ESQ., M.A.,
Inspector-General of Education in Mysore.

To

D.M.Narasinga Rao, ESQ., B.A., B.L.,
Secretary to the Government of H. H. the Maharaja of Mysore,
General *Department.*

SIR,

I have the honour to acknowledge with thanks the receipt of a copy of the Specification of an invention for "Improvements in the Connections of Electrical Condensers" by Marconi's Wireless Telegraph Company, Limited, of London, sent with your letter No.G.14077-9/G.M.445-14-15 dated 7th April 1916.

I have the honour to be,
Sir,
Your most obedient servant,

M. Shama Rao.

Inspector General.

TNR.

DIARY NO.....9531

ELEGRAPHIC ADDRESS : *Statcwoks.*

14-15 GM. 445-14 18.

44

No. 3854

MYSORE P. W. DEPARTMENT.

CENTRAL OFFICE,

Bangalore.....26th.....April.....1916.

From Rajasabhabhushana

KARPUR SHRINIVASRAO, ESQ., B.SC., L.C.E., M.R.A.S.,

Chief Engineer of Mysore,

Bangalore.

To

D. M. Narasinga Rao, Esq., B.A., B.L.,

Secretary to Government of Mysore,

General Department, Bangalore.

Sir,

I have the honour to acknowledge, with thanks, the receipt of a copy of the specification of an invention for " Improvements in the connections of Electrical Condensers" by Marconi's Wireless Telegraph Company, Limited., London, received with your letter No. G.14077-79/G.M.445-14-15 dated the 7th April 1916.

I have the honour to be,

Sir,

Your most obedient servant,

R V Sundaram

For Chief Engineer of Mysore.

J.R.

1915-16

MYSORE P. W. DEPARTMENT.

No. 3854.

From

THE CHIEF ENGINEER OF MYSORE,

Bangalore.

To The Secretary to Government General Department.

Dated Bangalore, 26th April 1916

Despatched 29th April 1916

Enclosure No.

SUBJECT.

Acknowledge the receipt of a copy of the Specification on invention of "Improvement in the Connections of Electrical Condensors".